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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,530	01/12/2004	Takaaki Tsuruya	03560.003420.	8248
5514	7590	02/22/2006	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			PHAM, HAI CHI	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,530

Applicant(s)

TSURUYA, TAKAAKI

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/09/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim1 is objected to because of the following informalities:
 - Line 10, "to overlapped" should read --to overlap--.Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The following limitation "said apparatus variably controls a dot system by the light beam" as recited in claim 3 appears to be vague in that it is not known whether the dot system is being controlled for its density, position and/or intensity.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (U.S. 6,504,147) in view of Iwasaki et al. (U.S. 5,887,124).

Ito et al. discloses a multi-beam scanner having n independently driven light sources (two laser light sources LD1 and Ld2), a scanner (polygon mirror 23) adapted to cause n light beams from said n light sources to perform scanning on a photosensitive member (photosensitive drum 77) in a main scanning direction, a moving unit (photosensitive drum motor 78) adapted to cause the n light beams to perform scanning in a sub-scanning direction by moving said photosensitive member, a control unit (CPU 101) for controlling said scanner unit and/or said moving unit so that a main scanning line on the photosensitive member during the high and low resolution modes, wherein during the high resolution mode, the modulation circuit (94) produces high frequency modulation signals so that a high average dot density is produced in the main

scanning direction M while during the low resolution mode, the modulation circuit (94) produces low frequency modulation signals so that a low average dot density is produced in the main scanning direction, the frequency modulation indicating the positions of the dots in the main scanning direction.

Ito et al. fails to teach the overlapped exposure being k times wherein is set to k_1 in the first mode, and k is set to k_2 during the second mode, wherein $n = i_1 \times k_1 = i_2 \times k_2$, and the dot strings formed by the light beams are shifted by a distance of d/k in the main scanning direction, where d is an interval between dots formed by each light beam.

Iwasaki et al. discloses an image processing apparatus for use in a light beam scanner where in the high resolution mode for printing includes shifting the dots by a distance equal to d/k , where d is an interval between dots and k is the ratio between the shifted resolution, e.g., $k = 720 \text{ dpi} / 360 \text{ dpi} = 2$, such that the dots are shifted by $d/2$ in the higher resolution (Fig. 3) as compared to k being $= 360 \text{ dpi} / 360 \text{ dpi} = 1$ and the dots are shifted by d in the lower resolution (Fig. 2) [it is noted that there is a typographical error in Fig. 3 where the resolution in the main scanning direction should read 720 dpi instead of 360 dpi.]

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Ito by shifting the dots in the main scanning direction by a distance related to the desired resolution so as to be overlapped as taught by Iwasaki et al. The motivation for doing so would have been set the proper position of the dots for increasing or decreasing the printing resolution.

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Ito et al. further teaches:

- a beam detector (49) adapted to detect a light beam caused to perform scanning by said scanner unit, wherein said modulator modulates the respective light beams so that the dot strings formed by the light beams are shifted by the distance of d/k in the main scanning direction, based on a detection signal from said beam detector (col. 17, line 61 to col. 18, line 6),
- said apparatus variably controls a dot system by the light beam (the modulation circuit 94 produces frequency modulation signals so that an average dot density is produced in the main scanning direction M according to the resolution mode of operation and variably positions the dots in the main scanning direction),
- the light beam is a laser beam (lasers LD1 and Ld2).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

February 20, 2006